

Marco Tulio F Rodrigues

List of Publications by Year in descending order

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201674

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#	ARTICLE	IF	CITATIONS
1	High Efficiency Photocatalytic Water Splitting Using 2D $\text{In}_2\text{S}_3/\text{O}_3\text{N}_4$ Z-scheme Catalysts. <i>Advanced Energy Materials</i> , 2017, 7, 1700025.	19.5	664
2	A materials perspective on Li-ion batteries at extreme temperatures. <i>Nature Energy</i> , 2017, 2, .	39.5	542
3	Deep eutectic solvents for cathode recycling of Li-ion batteries. <i>Nature Energy</i> , 2019, 4, 339-345.	39.5	422
4	CoNi_2S_4 -Graphene- ZnMoSe_2 as an Advanced Electrode Material for Supercapacitors. <i>Advanced Energy Materials</i> , 2016, 6, 1600341.	19.5	145
5	Calendar aging of silicon-containing batteries. <i>Nature Energy</i> , 2021, 6, 866-872.	39.5	137
6	A Review of Existing and Emerging Methods for Lithium Detection and Characterization in Li-Ion and Li-Metal Batteries. <i>Advanced Energy Materials</i> , 2021, 11, 2100372.	19.5	114
7	Hexagonal Boron Nitride-Based Electrolyte Composite for Li-Ion Battery Operation from Room Temperature to 150 °C. <i>Advanced Energy Materials</i> , 2016, 6, 1600218.	19.5	112
8	3D Nanostructured Molybdenum Diselenide/Graphene Foam as Anodes for Long-Cycle Life Lithium-ion Batteries. <i>Electrochimica Acta</i> , 2015, 176, 103-111.	5.2	107
9	Tuning the Electrochemical Reactivity of Boron- and Nitrogen-Substituted Graphene. <i>Advanced Materials</i> , 2016, 28, 6239-6246.	21.0	107
10	A flexible solar cell/supercapacitor integrated energy device. <i>Nano Energy</i> , 2017, 42, 181-186.	16.0	92
11	Reversible Formation of $\text{g-C}_3\text{N}_4$ 3D Hydrogels through Ionic Liquid Activation: Gelation Behavior and Room-Temperature Gas-Sensing Properties. <i>Advanced Functional Materials</i> , 2017, 27, 1700653.	14.9	90
12	Supercapacitor Operating At 200 Degrees Celsius. <i>Scientific Reports</i> , 2013, 3, 2572.	3.3	89
13	Fast Charging of Li-Ion Cells: Part I. Using Li/Cu Reference Electrodes to Probe Individual Electrode Potentials. <i>Journal of the Electrochemical Society</i> , 2019, 166, A996-A1003.	2.9	79
14	Carbon Dioxide Hydrogenation over a Metal-Free Carbon-Based Catalyst. <i>ACS Catalysis</i> , 2017, 7, 4497-4503.	11.2	71
15	Calendar-life versus cycle-life aging of lithium-ion cells with silicon-graphite composite electrodes. <i>Electrochimica Acta</i> , 2018, 280, 221-228.	5.2	67
16	Facile Synthesis of 3D Anode Assembly with Si Nanoparticles Sealed in Highly Pure Few Layer Graphene Deposited on Porous Current Collector for Long Life Li-Ion Battery. <i>Advanced Materials Interfaces</i> , 2017, 4, 1601043.	3.7	65
17	Quasi-Solid Electrolytes for High Temperature Lithium Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 25777-25783.	8.0	54
18	High-temperature solid electrolyte interphases (SEI) in graphite electrodes. <i>Journal of Power Sources</i> , 2018, 381, 107-115.	7.8	52

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19	Ionic Liquid–Organic Carbonate Electrolyte Blends To Stabilize Silicon Electrodes for Extending Lithium Ion Battery Operability to 100 °C. ACS Applied Materials & Interfaces, 2016, 8, 15242-15249.	8.0	51
20	Glass transition improvement in epoxy/graphene composites. Journal of Materials Science, 2013, 48, 7883-7892.	3.7	50
21	Density Variant Carbon Nanotube Interconnected Solids. Advanced Materials, 2015, 27, 1842-1850.	21.0	49
22	Anode-Dependent Impedance Rise in Layered-Oxide Cathodes of Lithium-Ion Cells. Journal of the Electrochemical Society, 2018, 165, A1697-A1705.	2.9	40
23	How Fast Can a Li-Ion Battery Be Charged? Determination of Limiting Fast Charging Conditions. ACS Applied Energy Materials, 2021, 4, 1063-1068.	5.1	37
24	Apparent Increasing Lithium Diffusion Coefficient with Applied Current in Graphite. Journal of the Electrochemical Society, 2020, 167, 120528.	2.9	34
25	Lithium Acetylide: A Spectroscopic Marker for Lithium Deposition During Fast Charging of Li-Ion Cells. ACS Applied Energy Materials, 2019, 2, 873-881.	5.1	32
26	Fast Charging of Li-Ion Cells: Part IV. Temperature Effects and “Safe Lines” to Avoid Lithium Plating. Journal of the Electrochemical Society, 2020, 167, 130508.	2.9	32
27	Electrochemical Dilatometry of Si-Bearing Electrodes: Dimensional Changes and Experiment Design. Journal of the Electrochemical Society, 2020, 167, 160551.	2.9	31
28	Rate-Dependent Aging Resulting from Fast Charging of Li-Ion Cells. Journal of the Electrochemical Society, 2020, 167, 120517.	2.9	27
29	Developing extreme fast charge battery protocols – A review spanning materials to systems. Journal of Power Sources, 2022, 526, 231129.	7.8	27
30	Curious Case of Positive Current Collectors: Corrosion and Passivation at High Temperature. ACS Applied Materials & Interfaces, 2017, 9, 43623-43631.	8.0	25
31	<i>In situ</i> X-ray spatial profiling reveals uneven compression of electrode assemblies and steep lateral gradients in lithium-ion coin cells. Physical Chemistry Chemical Physics, 2020, 22, 21977-21987.	2.8	25
32	Fast Charging of Li-Ion Cells: Part II. Nonlinear Contributions to Cell and Electrode Polarization. Journal of the Electrochemical Society, 2019, 166, A3305-A3313.	2.9	24
33	Doping stabilized Li ₃ V ₂ (PO ₄) ₃ cathode for high voltage, temperature enduring Li-ion batteries. Journal of Power Sources, 2018, 390, 100-107.	7.8	23
34	Increased Disorder at Graphite Particle Edges Revealed by Multi-length Scale Characterization of Anodes from Fast-Charged Lithium-Ion Cells. Journal of the Electrochemical Society, 2021, 168, 100509.	2.9	22
35	Rate limiting activity of charge transfer during lithiation from ionic liquids. Journal of Power Sources, 2016, 330, 84-91.	7.8	20
36	Dehydration Rather Than HF Capture Explains Performance Improvements of Li-Ion Cells by Ceramic Nanoparticles. ACS Applied Energy Materials, 2019, 2, 5380-5385.	5.1	19

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37	Insights on the cycling behavior of a highly-prelithiated silicon-graphite electrode in lithium-ion cells. <i>JPhys Energy</i> , 2020, 2, 024002.	5.3	18
38	Quantitative in situ fracture testing of tin oxide nanowires for lithium ion battery applications. <i>Nano Energy</i> , 2018, 53, 277-285.	16.0	17
39	Fast Charging of Li-Ion Cells: Part V. Design and Demonstration of Protocols to Avoid Li-Plating. <i>Journal of the Electrochemical Society</i> , 2021, 168, 010512.	2.9	17
40	Quantifying gas generation from slurries used in fabrication of Si-containing electrodes for lithium-ion cells. <i>Journal of Power Sources</i> , 2018, 395, 289-294.	7.8	16
41	Critical Evaluation of Potentiostatic Holds as Accelerated Predictors of Capacity Fade during Calendar Aging. <i>Journal of the Electrochemical Society</i> , 2022, 169, 050531.	2.9	16
42	Si powders and electrodes for high-energy lithium-ion cells. <i>Surface Science Spectra</i> , 2020, 27, 016801.	1.3	14
43	Thermoplastic Polyurethane Nanocomposites Produced via Impregnation of Long Carbon Nanotube Forests. <i>Macromolecular Materials and Engineering</i> , 2011, 296, 53-58.	3.6	13
44	Modulating electrode utilization in lithium-ion cells with silicon-bearing anodes. <i>Journal of Power Sources</i> , 2020, 477, 229029.	7.8	13
45	Dual-Salt Electrolytes to Effectively Reduce Impedance Rise of High-Nickel Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 40502-40512.	8.0	13
46	2D material integrated macroporous electrodes for Li-ion batteries. <i>RSC Advances</i> , 2017, 7, 32737-32742.	3.6	12
47	Fast Charging of Li-Ion Cells: Part III. Relaxation Dynamics and Trap-Controlled Lithium Ion Transport. <i>Journal of the Electrochemical Society</i> , 2019, 166, A4168-A4174.	2.9	12
48	Spatially-resolved lithiation dynamics from operando X-ray diffraction and electrochemical modeling of lithium-ion cells. <i>Journal of Power Sources</i> , 2021, 484, 229247.	7.8	11
49	Revealing anion chemistry above 3V in Li-ion capacitors. <i>Electrochimica Acta</i> , 2019, 324, 134871.	5.2	10
50	Evaluating the roles of electrolyte components on the passivation of silicon anodes. <i>Journal of Power Sources</i> , 2022, 523, 231021.	7.8	10
51	Time-Resolved X-ray Operando Observations of Lithiation Gradients across the Cathode Matrix and Individual Oxide Particles during Fast Cycling of a Li-Ion Cell. <i>Journal of the Electrochemical Society</i> , 2021, 168, 110555.	2.9	9
52	Concealed Cathode Degradation in Lithium-Ion Cells with a Ni-Rich Oxide. <i>Journal of the Electrochemical Society</i> , 2022, 169, 040539.	2.9	9
53	Examining Effects of Negative to Positive Capacity Ratio in Three-Electrode Lithium-Ion Cells with Layered Oxide Cathode and Si Anode. <i>ACS Applied Energy Materials</i> , 2022, 5, 5513-5518.	5.1	9
54	Fast Vortex-Assisted Self-Assembly of Carbon Nanoparticles on an Air-Water Interface. <i>Journal of Physical Chemistry B</i> , 2013, 117, 6524-6533.	2.6	7

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55	Carbon-Binder Weight Loading Optimization for Improved Lithium-Ion Battery Rate Capability. Journal of the Electrochemical Society, 2022, 169, 070519.	2.9	7
56	Coulombic inefficiency of graphite anode at high temperature. Electrochimica Acta, 2018, 285, 1-8.	5.2	6
57	Insights from incorporating reference electrodes in symmetric lithium-ion cells with layered oxide or graphite electrodes. Journal of Power Sources, 2019, 438, 227033.	7.8	4
58	Phase Transformations During Li-Insertion into V2O5 at Elevated Temperature. Jom, 2017, 69, 1509-1512.	1.9	3
59	Exploring Heterogeneity in Li Battery Electrodes using FIB-SEM Integrated with Raman and TOF-SIMS. Microscopy and Microanalysis, 2019, 25, 862-863.	0.4	3
60	Design of a Scavenging Pyrrole Additive for High Voltage Lithium-Ion Batteries. Journal of the Electrochemical Society, 2022, 169, 040507.	2.9	3
61	Hydrogels: Reversible Formation of N^3 3D Hydrogels through Ionic Liquid Activation: Gelation Behavior and Room-Temperature Gas Sensing Properties (Adv. Funct. Mater.)	1.0	1
62	In Situ Lithiated Reference Electrode: Four Electrode Design for In-operando Impedance Spectroscopy. Journal of Visualized Experiments, 2018, , .	0.3	1
63	Electrochemical Modeling and Experimental Verification of Lithiation Gradients in Oxide Cathodes of Lithium-Ion Cells. Journal of the Electrochemical Society, 2022, 169, 040503.	2.9	1